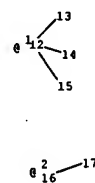
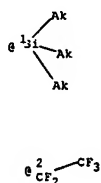


10/537,484 (interference search)

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	71	(556/9).CCLS.	US-PGPUB	OR	OFF	2007/03/17 19:00
L2	120	(556/136).CCLS.	US-PGPUB	OR	OFF	2007/03/17 19:02
L3	33	(427/252).CCLS.	US-PGPUB	OR	OFF	2007/03/17 19:15



chain nodes :

12 13 14 15 16 17 21 22

ring nodes :

1 2 3 4 5 6 7 8 9 10 11

chain bonds :

1-21 6-22 12-13 12-14 12-15 16-17

ring bonds :

1-2 1-5 1-11 2-3 2-11 3-4 3-11 4-5 4-11 5-11 6-7 6-10 6-11 7-8 7-11 8-9 8-11 9-10 9-11 10-11

exact/norm bonds :

1-2 1-5 1-11 1-21 2-3 2-11 3-4 3-11 4-5 4-11 5-11 6-7 6-10 6-11 6-22 7-8 7-11 8-9 8-11 9-10 9-11 10-11 12-13 12-14 12-15

exact bonds :

16-17

G1:F,CF3,[*1],[*2]

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 21:CLASS 22:CLASS

10/537,484

(FILE 'HOME' ENTERED AT 18:34:11 ON 17 MAR 2007)

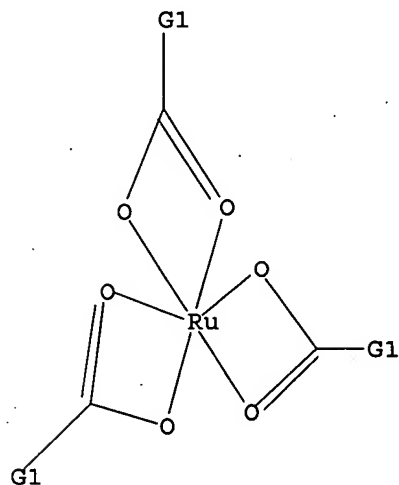
FILE 'REGISTRY' ENTERED AT 18:34:31 ON 17 MAR 2007

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 Me,Et,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu,CF3

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 18:35:00 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 297 TO ITERATE

100.0% PROCESSED 297 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 4907 TO 6973

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 18:35:06 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 5886 TO ITERATE

100.0% PROCESSED 5886 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1

=>

Uploading C:\Program Files\Stnexp\Queries\537484-2.str

L4 STRUCTURE UPLOADED

=> d his

(FILE 'HOME' ENTERED AT 18:34:11 ON 17 MAR 2007)

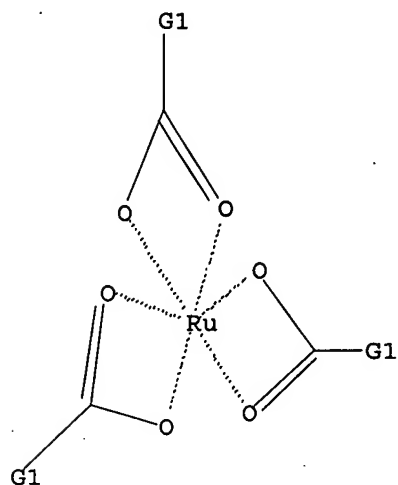
FILE 'REGISTRY' ENTERED AT 18:34:31 ON 17 MAR 2007

L1 STRUCTURE UPLOADED
L2 0 S L1
L3 0 S L1 FULL
L4 STRUCTURE UPLOADED

=> d l4

L4 HAS NO ANSWERS

L4 STR



G1 Me, Et, n-Pr, i-Pr, n-Bu, i-Bu, s-Bu, t-Bu, CF3

Structure attributes must be viewed using STN Express query preparation.

=> s l4

SAMPLE SEARCH INITIATED 18:36:50 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 297 TO ITERATE

100.0% PROCESSED 297 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 4907 TO 6973

PROJECTED ANSWERS: 0 TO 0

L5 0 SEA SSS SAM L4

=> s l4 full

FULL SEARCH INITIATED 18:36:56 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 5886 TO ITERATE

100.0% PROCESSED 5886 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L6 0 SEA SSS FUL L4

10/537,484

(FILE 'HOME' ENTERED AT 18:42:31 ON 17 MAR 2007)

FILE 'REGISTRY' ENTERED AT 18:42:41 ON 17 MAR 2007

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR

Structure diagram not available for display

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 18:43:07 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 1453 TO ITERATE

100.0% PROCESSED 1453 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 26774 TO 31346

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 18:43:13 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 28802 TO ITERATE

100.0% PROCESSED 28802 ITERATIONS

5 ANSWERS

SEARCH TIME: 00.00.02

L3 5 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

172.10

172.31

FILE 'CAPLUS' ENTERED AT 18:43:20 ON 17 MAR 2007

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=> s 13

L4 8 L3

=> d 1-8 bib abs

L4 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:253944 CAPLUS
DN 142:327289
TI Deposition of ruthenium-silicon mixed adhesion films between low
dielectric-insulator and diffusion-barrier layers
IN Sakai, Tatsuya; Okada, Yukiko; Matsuki, Yasuo
PA JSR Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

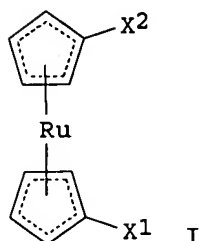
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005079468	A	20050324	JP 2003-310453	20030902
PRAI	JP 2003-310453		20030902		
OS	MARPAT 142:327289				

AB The title deposition of adhesive layer between a low dielec. insulator layer and Damascene-formed diffusion-barrier/circuit layers involves CVD or coating-annealing with reactants containing (1) Ru compds. and (2) cyclic silane compds. The Ru compds. may be (A) (cyclopentadienyl derivs.)₂Ru, (B) Ru(CO)₃, (C) (ACAC')₃Ru (ACAC' = resonated ligand OC(R₂)CC(R₂)O; R₂ = H, C1-6 alkyl, fluoroalkyl, hydroxyalkyl), and/or (D) (R₃CO₂)₃Ru (R₃ = C1-6 alkyl, fluoroalkyl, hydroxyalkyl). The deposition process provides a Ru-Si mixture adhesive film for effective adhesion in prevention of delamination between a low dielec. insulator layer and Damascene-formed diffusion-barrier/circuit layers.

L4 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:493925 CAPLUS
DN 141:62428
TI Ruthenium compound and process for producing metallic ruthenium film
IN Sakai, Tatsuya; Okada, Sachiko; Matsuki, Yasuo
PA JSR Corporation, Japan
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004050947	A1	20040617	WO 2003-JP11848	20030917
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2005060814	A	20050310	JP 2003-318133	20030910
	AU 2003272881	A1	20040623	AU 2003-272881	20030917
	US 2006240190	A1	20061026	US 2005-537484	20050603

PRAI	JP 2002-350951	A	20021203
	JP 2003-282385	A	20030730
	WO 2003-JP11848	W	20030917
OS	MARPAT 141:62428		
GI			



AB A Ru compound capable of forming filmy metallic Ru of good quality; and a process for producing a metallic Ru film which comprises using the Ru compound to produce the film by CVD are described. The Ru compound as a material for CVD is represented by (I), where X_{1,2} = H, F, trifluoromethyl, pentafluoroethyl, or SiR₁₋₃, and R₁₋₃ = C₁₋₁₀ hydrocarbon group, Ru(OCOR₄)₃, where R₄ = trifluoromethyl and C₁₋₁₀ hydrocarbon group, or YRuH_nL_m, where Y = cyclopentadienyl, cyclohexadienyl, cycloheptadienyl, cyclooctadienyl, butadienyl, or 2,3-dimethyl-1,3-butadienyl, L = carbonyl, Me, or ethenyl, n = 1-4, m = 0-2, n + m = 3 or 4.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2002:743394 CAPLUS
DN 137:370207
TI Molecular Structure of Ru(η-C₅Me₅)(η-C₅F₅) by Gas-Phase Electron Diffraction and Density Functional Theory
AU Johnston, Blair F.; Rankin, David W. H.; Robertson, Heather E.; Hughes, Russell P.; Lomprey, Jeffrey R.
CS Department of Chemistry, University of Edinburgh, Edinburgh, EH9 3JJ, UK
SO Organometallics (2002), 21(22), 4840-4846
CODEN: ORGND7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
AB The structure of Ru(C₅Me₅)(C₅F₅) was determined by gas-phase electron diffraction and d. functional theory. Comparison structures of the known compds. Ru(C₅H₅)₂ and Ru(C₅F₅)(C₅H₅), as well as the unknown compound Ru(C₅F₅)₂, also were determined by d. functional theory.

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1996:591079 CAPLUS
DN 125:276161
TI Synthesis and properties of perfluoroferrocene and perfluororuthenocene. A potential class of high temperature materials
AU Winter, C. H.
CS Dept. Chem., Wayne State Univ., Detroit, MI, USA
SO Report (1995), Order No. AD-A307650, 17 pp. Avail.: NTIS
From: Gov. Rep. Announce. Index (U. S.) 1996, 96(19), Abstr. No. 19-00,395
DT Report
LA English

AB Preparation of decafluoroferrocene and decafluororuthenocene from permetalated precursors, preparation of mono- and disubstituted perfluorometallocenes and evaluation of the thermal characteristics of polymers and oligomers derived from the perfluorometallocenes are reported. The preparation of permercurated, perlithiated, permagnesited, perzincated, and peraluminated cyclopentadienyl complexes were examined with the reactions of these species with simple electrophiles. Permercurated metallocenes cannot be fluorinated to give decafluorometallocenes. Most fluorinating agents are not strong enough to react with the permercurated metallocenes, while very strong fluorinating agents destroy the metallocenes. More reactive C-metal bonds would require less reactive fluorinating agents, which might lead to a successful preparation of decafluorometallocenes. It has so far not been possible to find that right combination of permetalated metallocene and electrophilic fluorinating agents that gives the perfluorometallocene.

L4 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:806948 CAPLUS

DN 123:340365

TI Electrochemical Studies of Organometallic Complexes with Tetra-n-butylammonium Tetrakis[3,5-bis(trifluoromethyl)phenyl]borate as the Electrolyte. X-ray Crystal Structure of [C5(CF3)Me4]Fe(C5H5)

AU Gassman, Paul G.; Sowa, John R., Jr.; Hill, Michael G.; Mann, Kent R.

CS Department of Chemistry, University of Minnesota, Minneapolis, MN, 55455, USA

SO Organometallics (1995), 14(10), 4879-85

CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

AB The tetra-n-butylammonium tetrakis[3,5-bis(trifluoromethyl)phenyl]borate (TBA+TFPB-) electrolyte/CH2Cl2 solvent system improves the electrochem. reversibility of pentamethylcyclopentadienyl (Cp*) ruthenocenes, Cp*RuCp' (Cp' = fluorenyl, indenyl, cyclopentadienyl (Cp), acetylcyclopentadienyl, pentachlorocyclopentadienyl), as indicated by ip,c/ip,a ratios of 0.79-1.0 as determined by cyclic voltammetry. The quasi-reversible potentials (E°) of the Cp*RuCp' complexes and the complete series of Group 8 Cp2M and Cp*2M complexes (M = Fe, Ru, Os) are also reported in TBA+TFPB-/CH2Cl2. A study of the E° values of Group 8 complexes containing the (trifluoromethyl)tetramethylcyclopentadienyl (Cp.thermod.) ligand indicate that the Cp.thermod. complexes are slightly (0.06-0.08 V per Cp.thermod.) more difficult to oxidize than the cyclopentadienyl (Cp) derivs.. The structure of [C5(CF3)Me4]Fe(C5H5) was determined at -101° by a single-crystal x-ray diffraction study. The structure shows eclipsed Cp.thermod. and Cp rings, and the Fe to Cp.thermod. centroid distance (1.643 Å) is slightly shorter than the Fe to Cp centroid distance (1.651 Å); otherwise, no extreme differences in the coordination of the Cp.thermod. and Cp rings are noted. An IR spectroelectrochem. study of trans-[Cp.thermod.Fe(CO)2]2 shows that it is electrochem. oxidized to trans-[Cp.thermod.Fe(CO)2]2+ in TBA+TFPB-/CH2Cl2.

L4 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1994:54700 CAPLUS

DN 120:54700

TI Preparation of 1,2,3,4-tetraalkyl-5-perfluoroalkylcyclopentadiene and bis(perfluoroalkyl)trialkylcyclopentadiene and their transition metal complexes

IN Gassman, Paul G.; Sowa, John R.; Mickelson, John W.

PA USA

SO U.S., 10 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

PATENT NO.

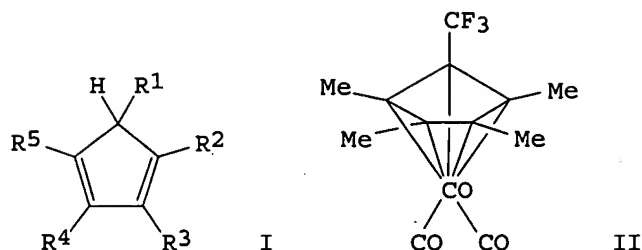
KIND

DATE

APPLICATION NO.

DATE

PI	US 5245064	A	19930914	US 1992-929959	19920814
PRAI	US 1992-929959		19920814		
OS	MARPAT 120:54700				
GI					



AB The preparation of title cyclopentadienes I (R1 = C1-5 perfluoroalkyl; R2, R3 = C1-5 perfluoroalkyl, C1-5 alkyl; R4, R5 = C1-5 alkyl) with no more than two R1, R2, and R3 can be C1-5 perfluoroalkyl and their transition metal complexes is described. Thus, lithiation of cis-2-bromo-2-butene with lithium wire in Et2O followed by treatment with CF3CO2Et and acidic workup gave MeCH:CMcC(OH)(CF3)CMe:CHMe which on cyclization with MeSO3H in CH2Cl2 gave title cyclopentadiene I (R1 = CF3, R2-R5 = Me). Reaction of I (R1 = CF3, R2-R5 = Me) with Co2(CO)8 in the presence of 1,3-cyclohexadiene in CH2Cl2 gave 14% cobalt complex II.

L4 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 1993:7176 CAPLUS
 DN 118:7176

TI Parameter scale for substituent effects in cyclopentadienyl complexes based on gas-phase electron-transfer equilibrium studies of ruthenocene derivatives

AU Ryan, Matthew F.; Siedle, Allen R.; Burk, Mark J.; Richardson, David E.
 CS Dep. Chem., Univ. Florida, Gainesville, FL, 32611, USA
 SO Organometallics (1992), 11(12), 4231-7
 CODEN: ORGND7; ISSN: 0276-7333

DT Journal
 LA English

AB Gas-phase electron transfer equilibrium (ETE) studies have been used to obtain the free energies of ionization at 350 K for a number of ruthenocene derivs., LL'Ru, where L and L' are derivs. of the η5-cyclopentadienyl ligand (Cp). Equilibrium consts. were determined by using Fourier transform ion cyclotron

resonance mass spectrometry. Various metallocene and organic reference compds. have been used to establish the free energies of ionization (ΔGi°), and the derived values cover a range from .apprx.135 to 195 kcal mol⁻¹. A parameter scale (γ) for Cp substituent effects is derived from the data by assigning anchor parameters to Cp and η5-pentamethylcyclopentadienyl (Cp'). The ETE results suggest that L = fluorenyl does not stabilize the oxidation of Cp'RuL to the extent that L = Cp' does, with the effect of L = Flu being .apprx.65% of the Cp' effect. The consistency of the calculated free energies of ionization based on the assumption of ligand additivity is within .apprx.3 kcal mol⁻¹. The potential usefulness of the γ parameters in correlation and prediction of Cp substituent effects in organometallic reactivity and catalysis is considered.

L4 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 1992:490485 CAPLUS
 DN 117:90485

TI 1,2,3,4-Tetramethyl-5-(trifluoromethyl)cyclopentadienide: a unique ligand

with the steric properties of pentamethylcyclopentadienide and the electronic properties of cyclopentadienide

AU Gassman, Paul G.; Mickelson, John W.; Sowa, John R., Jr.

CS Dep. Chem., Univ. Minnesota, Minneapolis, MN, 55455, USA

SO Journal of the American Chemical Society (1992), 114(17), 6942-4.

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA English

OS CASREACT 117:90485

AB 1,2,3,4-Tetramethyl-5-(trifluoromethyl)cyclopentadiene (Cp.thermod.H) was prepared from cis-2-bromo-2-butene by lithiation, and reaction of cis-2-lithio-2-butene with Et trifluoroacetate (82% yield), followed by cyclodehydration with methanesulfonic acid (82% yield). Complexes of Cp.thermod. with iron, ruthenium, osmium, and rhodium were prepared. These complexes were compared to the corresponding pentamethylcyclopentadienide (Cp*) and cyclopentadienide (Cp) complexes through x-ray photoelectron spectroscopic measurement of the transition metal inner shell electron binding energies. Although sterically comparable to Cp*, Cp.thermod. is electronically identical to Cp based on the observation that the binding energies of the inner shell electrons of iron, ruthenium, osmium, and rhodium in their resp. complexes are identical.